

Amendments to the Claims

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

Listing of the Claims

1. (currently amended) A fin assembly for a surf craft, the assembly including:
a base extending in a first direction from a first base portion to a second base portion for mounting the assembly to the surf craft;
a larger fin extending at least partly from the first base portion, the larger fin extending at an acute angle to the first direction and having an acute angle portion such that the larger fin has an acute angle side having a substantial portion of the acute angle side facing in the first direction and a second side opposite the acute angle side; and
a smaller fin extending at least partly from the second base portion and positioned on the second base portion relative to the larger fin adjacent the acute angle side and substantially opposite the second side and wherein at least one line normal to the base intersects both the larger and smaller fins; and
wherein the larger and smaller fins include respective outer surfaces separate from each other and configured such that when in use attached to a surfcraft the respective outer surfaces of the larger and smaller fins are exposed to water.
2. (previously presented) An assembly according to claim 1 wherein the base and the larger and smaller fins are integrally formed.
3. (previously presented) An assembly according to claim 1 wherein the larger and smaller fins have leading edges and the leading edges of the fins are aligned.

4. (previously presented) An assembly according to claim 1 wherein larger and smaller fins have leading edges and trailing edges and the leading and the trailing edges are aligned.
5. (previously presented) An assembly according to claim 1 wherein the larger fin has primary leading and trailing edges and the smaller fin has secondary leading and trailing edges and the base extends longitudinally between the leading primary edge and the trailing secondary edge.
6. (previously presented) An assembly according to claim 1 wherein the larger fin has primary leading and trailing edges and the smaller fin has secondary leading and trailing edges and the trailing primary edge and the leading secondary edge are joined by an intermediate arcuate edge defined by the base.
7. (original) An assembly according to claim 6 wherein the arcuate edge is of varying radius.
8. (previously presented) An assembly according to claim 1 wherein the larger fin extends along a first plane that is normal to the base.
9. (previously presented) An assembly according to claim 8 wherein both the larger and smaller fins extend along the first plane.
10. (currently amended) An assembly according to claim 1 wherein larger and smaller fins have leading edges and trailing edges and wherein the fins include respective pairs of opposite faces that extend between the leading and trailing edges.
11. (original) An assembly according to claim 10 wherein one or more of the faces are substantially planar.

12. (currently amended) A fin assembly including:
a base for mounting the assembly to an object and extending in a first direction;
a larger fin extending from the base and having a convex primary edge and a concave primary edge; and
a smaller fin extending rearwardly from the base and having a leading secondary edge and a trailing secondary edge, wherein the smaller fin is on the concave primary edge side of the larger fin, wherein at least one line normal to the base intersects both the larger and smaller fins and wherein the larger and smaller fins include respective outer surfaces separate from each other and configured such that when in use attached to a surfcraft the respective outer surfaces of the larger and smaller fins are exposed to water.

13. (currently amended) An assembly according to claim 12 wherein the leading convex primary edge is curved substantially complementarily to the leading secondary edge.

14. (previously presented) A fin assembly including:
a base for mounting the assembly to an object;
a larger fin extending from the base and having a convex primary edge and a concave primary edge and a high rake;
a smaller fin extending rearwardly from the base and having a first secondary edge and a second secondary edge, the smaller fin being adjacent the concave primary edge of the larger fin and providing the assembly with a rake of less than about 90°; and
a feathered portion between the larger fin, the smaller fin and the base.

15. (original) An assembly according to claim 14 wherein the edges extend along a single plane.

16. (currently amended) An assembly according to claim 14 wherein the smaller fin is, in use, deformable in a direction normal to the plane a plane including the smaller fin.

17. (previously presented) A fin assembly for a surf craft, the assembly including:
a base for mounting the assembly to the surf craft;
a primary fin that extends from the base and which has a first edge and a second edge that meet at a primary tip, where the edges lie substantially within a common plane; and
a secondary fin extending from the base, away from the primary fin, and wherein the secondary fin, having an edge that has a tangent that is parallel to the plane and the primary fin extends such that the secondary fin is positioned between a portion of the primary fin and the base for providing the assembly with a rake of less than about 90°.

18. (currently amended) A fin assembly for a surf craft, the assembly including:
a base having a substantially planar surface for mounting the assembly to the surf craft;
a primary fin that extends from the base at an acute angle and which has a leading edge ~~away from the acute angle~~ and a trailing edge ~~adjacent the acute angle~~ that meet at a primary tip wherein the leading edge follows a path in a direction from a leading region to a trailing region of the primary fin; and
a secondary fin extending from the base, and positioned relative to the primary fin such that the path followed by the leading edge of the primary fin is partly toward the secondary fin, and wherein the secondary fin , having has an edge that has a tangent that is parallel to the surface wherein the primary fin extends relative to the secondary fin such that the assembly has a rake of less than about 90°.

19. (previously presented) An assembly according to claim 18 wherein the base, the primary fin and the secondary fin are integrally formed.

20. (previously presented) An assembly according to claim 18 wherein the base and the secondary fin extend longitudinally.

21. (original) An assembly according to claim 20 wherein the base extends longitudinally between the leading edge and the trailing edge.

22. (previously presented) An assembly according to claim 21 wherein the secondary fin is directly underlying the leading and the trailing edge when the base is substantially horizontally oriented.

23. (previously presented) An assembly according to claim 22 wherein the secondary fin, the trailing edge and the leading edge extend in a common plane.

24. (previously presented) An assembly according to claim 18 wherein the trailing edge is feathered in an area intermediate of the secondary fin and the leading edge.

25. (previously presented) An assembly according to claim 24 wherein the trailing edge and the secondary fin are joined by an intermediate arcuate edge defined by the base.

26. (original) An assembly according to claim 25 wherein the arcuate edge is of varying radius.

27. (previously presented) An assembly according to claim 18 wherein the primary fin extends along a first plane that is normal to the base.

28. (previously presented) An assembly according to claim 18 wherein the primary fin includes a pair of opposite faces that extend between the leading and the trailing edges.

29. (original) An assembly according to claim 28 wherein one or both of the faces are substantially planar.

30. (original) An assembly according to claim 28 wherein one or both of the faces are substantially arcuate.

31. (canceled)

32. (original) An assembly according to claim 18 wherein the fin assembly includes one or more mounting formations that extend from the surface for engaging with complementary locating formations extending from the surf craft.

33. (original) An assembly according to claim 32 wherein the or each mounting formation is a protrusion, and the or each locating formation is a recess.

34. (original) An assembly according to claim 33 wherein the assembly includes two spaced apart mounting formations and the surf craft includes at least two locating formations.

35. (previously presented) A fin assembly including:
a base for mounting the assembly to an object;
a large fin extending from the base in a direction at an acute angle relative to the base;
a smaller fin extending from the base in the acute angle defined by the large fin and the base, the smaller fin trailing the large fin and the large fin extending relative to the smaller fin such that the assembly has a rake of less than 90°, wherein the base, the large fin and the smaller fin include a combined total sectional area (A_f); and
a feathered portion between two or more of the large fin, the smaller fin and the base, wherein the feathered portion includes a sectional area (A_p) and $A_p > 0.2.A_f$.

36. (currently amended) A surf craft including a fin assembly of any one of claim 1, ~~claim 17 or claim 18~~ claim 12, claim 14, claim 17, claim 18 or claim 35.

37. (currently amended) A surf craft including a fin assembly of any one of claim 12, claim 14 or claim 35, where the object is a surf craft and the assembly is mounted to the surf craft.

38. (previously presented) A method of manufacturing a fin assembly for a surf craft, the method including:

forming a base for mounting the assembly to the surf craft;

forming a larger fin that extends from the base at an acute angle relative to the base and which has a leading primary edge and a trailing primary edge; and

forming a smaller fin that extends from the base such that the smaller fin is in the acute angle of between the larger fin and the base and which has a leading secondary edge and a trailing secondary edge, such that the larger fin extends relative to the smaller fin such that the assembly has a rake of less than 90°.

39. (original) A method according to claim 38 wherein the forming steps are performed simultaneously.

40. (previously presented) A method according to claim 38 wherein the base, the larger fin and the smaller fin are integrally formed.

41. (original) A method according to claim 38 including the additional step of forming at least one mounting formation that extends from the base for engaging with a complementary locating formation that extends from the surf craft.

42. (previously presented) A fin assembly for a surf craft, the assembly, in use, providing a predetermined sectional water engaging area (A) and including:

a base for mounting the assembly to extend from a surface of the surf craft; a larger fin extending from the base at an acute angle relative to the base; and a smaller fin extending from the base in the acute angle between the larger fin and the base, the smaller fin trailing the larger fin and the larger fin extending rearwardly of the smaller fin for providing the assembly with a rake of less than 90°, wherein a high proportion of A is near the surface.

43. (previously presented) An assembly according to claim 42 wherein the larger fin terminates in a point having a predetermined height (H) with respect to the surface, and at least 0.4.A is within 0.3.H of the surface.

44. (previously presented) An assembly according to claim 42 wherein the larger fin terminates in a point having a predetermined height (H) with respect to the surface and wherein at least 0.45.A is within 0.3.H of the surface.

45. (previously presented) An assembly according to claim 42 wherein the larger fin terminates in a point having a predetermined height (H) with respect to the surface and wherein at least 0.5.A is within 0.3.H of the surface.

46. (original) An assembly according to claim 42 wherein at least 0.35.A is within 0.22H of the surface.

47 - 56. (canceled)

57. (currently amended) A unitary fin structure suitable for use with a surfboard, the unitary fin structure comprising a fin body having a base edge which when the fin structure is installed cooperates with an underside structure of the surfboard, the fin body including a front edge and a rear edge, a feathered or cutout portion in the rear edge extending towards the front edge, the feathered or cutout portion separating part of the fin body into two limbs, one limb being between the base edge and the feathered or cutout portion so as to form a stabilizing fin section of the fin body and the other limb forming a maneuvering fin section of the fin body wherein a tip of the maneuvering fin extends over at least a portion of the stabilizing fin and wherein at least one line normal to the base intersects both the maneuvering and stabilizing fins.

58. (previously presented) A unitary fin structure in accordance with claim 57 wherein the base edge abuts an underside face of the surfboard.

59. (previously presented) A unitary fin structure in accordance with claim 58 wherein, when installed, an angle between a rearwardly-disposed section of the underside face of the surfboard and a construction line extending between a rearmost point of the stabilizing fin section and the rearmost point of the maneuvering fin section is less than 90°.

60. (previously presented) A unitary fin structure in accordance with claim 58 wherein when installed, a fin perimeter extends from the underside of the surfboard, the fin perimeter comprising the front edge and the rear edge, wherein the front edge extends from a front corner of the base edge rearwardly and away from the underside face of the surfboard to a rounded distal tip of the maneuvering section in a compound arcuate manner, and the rear edge extends from the rounded distal tip to a rear corner of the base edge, the rear edge having a first intermediate portion being coincident with an inner concave periphery of the feathered portion and having a second intermediate portion being coincident with a rounded tip of the stabilizing fin portion.

61. (currently amended) A unitary fin structure in accordance with claim 57 wherein the feathered or cutout portion is substantially concave.

62. (previously presented) A unitary fin structure in accordance with claim 57 wherein the fin body includes a selected sectional water engaging area (A), the maneuvering fin section terminates at a point disposed at a selected height (H) from the base edge, and at least 0.4 A is within 0.3 H of the base edge.

63. (previously presented) A unitary fin structure in accordance with claim 57 wherein the fin body includes a combined total sectional area (A_f) and the feathered portion includes a sectional area (A_t), and A_t is greater than 0.2 A_f .

64. (previously presented) A unitary fin structure in accordance with claim 57 wherein when installed, a remote tip of the maneuvering fin section of the main body is disposed rearward of a rearward-most tip of the stabilizing fin section of the fin body.

65. (previously presented) A unitary fin structure in accordance with claim 57 wherein one or more mounting formations extend from the base edge for engaging with complimentary locating formations associated with the surfboard.

66. (previously presented) A unitary fin structure in accordance with claim 65 wherein the or each mounting formation is a protrusion, and the or each locating formation is a recess.

67. (previously presented) A unitary fin structure in accordance with claim 57 wherein two spaced apart mounting formations are provided, to correspond with two locating formations disposed on the surfboard.

68. (previously presented) A unitary fin structure in accordance with claim 57 wherein the fin body includes a sectional area of less than 95cm².

69. (previously presented) A unitary fin structure in accordance with claim 68 wherein the sectional area is between about 90cm² and 95cm².

70. (previously presented) A unitary fin structure in accordance with claim 69 wherein a perimeter of the sectional area excluding the base edge is greater than about 380mm.

71. (previously presented) A unitary fin structure in accordance with claim 57 wherein the fin body includes a pair of opposite faces which extend between the front and rear edges, and one or both of the faces are substantially planar.

72. (previously presented) A unitary fin structure in accordance with claim 57 wherein the fin body includes a pair of opposite faces which extend between the front and rear edges, and one or both of the faces are substantially arcuate.

73. (previously presented) A unitary fin structure in accordance with claim 57 wherein when installed the maneuvering fin section is disposed generally coplanar with a normal plane which extends substantially perpendicularly to the underside of the board, while the stabilizing fin section extends at an angle to the normal plane.

74. (currently amended) A unitary fin structure in accordance with claim 57 ~~wherein the feathered portion is an undercut or bight section wherein the fin body has a streamline profile in transverse section which extends substantially from the front edge of the fin body to the rear edge thereof, the streamline section profile extending over at least a portion of the stabilizing fin section.~~

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75. (previously presented) A unitary fin structure in accordance with claim 57 wherein the stabilizing fin section is a lobe.

76. (previously presented) A unitary fin structure in accordance with claim 57 wherein when installed, a remote tip of the stabilizing fin section of the main body is disposed rearward of a rearward-most tip of the base edge.

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